

Remarks/Arguments:

On page 2 of the Office Action, claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sawyer (USPN 5,828,737). It is respectfully submitted however, that claim 1 is patentable over the art of record for the reasons set forth below.

Independent claim 1 recites a data processing method where pieces of information such as schedule of usage of the transmission band and schedule of available transmission band define a band reservation rule ("*schedule of usage...schedule of the transmission band which is available...as defined as a band reservation rule*"). Furthermore, the band reservation rule is used for partially assigning and exchanging the bandwidth between a plurality of terminals in order to maximize usage efficiency of the available transmission band ("*transmission band is partially assigned or partially exchanged...for maximizing the usage efficiency of all the available transmission band...based on...a band reservation rule*").

Stated in the specification on page 20 lines 24-25, there is a partial reserving or exchanging of the transmission band ("*data relay processing unit 100 makes it possible to assign or exchange a part, or all, of the band*"). Partial reserving or exchanging is needed to efficiently manage the utilization of the transmission band. An example of partial reserving of the transmission band is shown in figure 2 of the specification. In this example the entire transmission band can accommodate transmissions up to 15 Mbps. Terminal unit A has a partial rate of 10 Mbps reserved between 0 and 5 hours. Terminal unit B has a partial rate of 5 Mbps reserved during the same time period. In this reservation, all of the available transmission band is utilized efficiently. Furthermore, partial exchange of the transmission band is shown in figure 3 of the specification. Figure 3 shows terminal unit A communicating at a rate of 10 Mbps with server 1 before the exchange. It also shows terminal unit B communicating at a rate of 10 Mbps with server 2 before the exchange. After the partial exchange of transmission band, terminal unit A communicates at 8 Mbps with server 1 and 2 Mbps with server 2. Terminal unit B communicates at 2 Mbps with server 1 and 8 Mbps with server 2. In this exchange the overall 10 Mbps transmission requirement of terminal A and B is satisfied by partially exchanging transmission band between server 1 and 2. Furthermore, pages 22 and 23 of the specification teach that

partial reserving and exchanging of transmission band is performed based on a **band reservation rule** for **maximizing the usage efficiency of all the available transmission band** ("*based on the usage schedule...as a usage plan of the network resources...thereby the usage efficiency...can be expected to improve*"). The band reservation rule is based on the **schedule of usage** of each terminal and the **schedule of available bandwidth to be assigned**. For example, figure 2 shows a system wherein 15 Mbps is the available transmission band to be assigned. In this particular example, between 0 and 5 hours terminal A uses 10 Mbps and terminal B uses 5 Mbps. Based on this available transmission band and the schedule of usage of terminals A and B, all 15 Mbps of transmission band are able to be assigned and therefore efficiently utilized. Not only are the bandwidth requirements of terminals A and B satisfied, but the overall usage efficiency of the overall bandwidth is increased due to partially reserving available bandwidth based on the bandwidth reservation rule.

Sawyer, in the abstract teaches a system for estimating bandwidth usage of a plurality of communication devices and then charging the devices a price based on their usage ("*charge for the communication is then determined by...the estimated total bandwidth*"). Figure 1 of Sawyer shows a plurality of communication devices connected to a node for communication. Figures 3A and 3B, show the usage of the available bandwidth on communication link 18. These figures are described in column 3 lines 36-40 ("*use of available bandwidth on either communication links 18*"). For example, communication devices 16 are varying their usage of bandwidth over link 18 in a specific time frame. Sawyer is merely concerned with charging the communication devices based on their individual bandwidth usage and is not concerned with a bandwidth rule for increasing the usage efficiency of the available bandwidth. Specifically, Sawyer does not teach partially assigning and **partially exchanging** bandwidth for maximizing the usage efficiency of available bandwidth based on a **band reservation rule**. Furthermore, Sawyer's communication devices 16 communicate with the same node independent of one another and therefore **cannot partially exchange** bandwidth.

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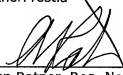
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Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record.

Claims 2, 41 and 42 include all the features of claim 1 from which they depend. Thus, claims 2, 41 and 42 are also patentable over the art of record for the reasons set forth above.

Respectfully submitted,

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